

REMARKS

Claims 1-7, 10-16, 18 and 21 are pending in the subject application. Claim 1 is the sole independent claim.

By the instant amendment, claim 1 is amended, and new claims 22-25 are added. No new matter is added.

A. Introduction

In the outstanding Office Action Made Final:

1. claims 1, 3-7, 12-16, 18 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0192686 to Hisai et al. ("the Hisai et al. reference") in view of U.S. Patent No. 5,413,167 to Hara et al. ("the Hara et al. reference"); and
2. claims 2, 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hisai et al. reference as modified by the Hara et al reference and further in view of U.S. Patent No. 3,621,906 to Leffert ("the Leffert reference").

B. Asserted Obviousness Rejection of Claims 1, 3-7, 12-16, 18 and 21

In the outstanding Office Action Made Final, claims 1, 3-7, 12-16, 18 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hisai et al. reference in view of the Hara et al. reference. This rejection is respectfully traversed for at least the reasons set forth below.

Independent claim 1 is amended to recite that a baking system includes, in part,

a heatpipe adapted to cool the plate using vaporization of a coolant in the heatpipe, the *heatpipe being external to the plate* and being arranged in proximity to the plate, the *heatpipe and the plate being discrete elements*, the *heater* being disposed *between the heatpipe and the plate*;

a coolant storage tank *adapted* to supply the coolant into the heatpipe when the plate is cooled and *to store the coolant supplied to the heatpipe when the plate is heated*; and

a thermostatic element *adapted to maintain an approximately constant temperature of the coolant supplied into the heatpipe* when the plate is cooled.

Applicants respectfully submit that the cited references fail to teach or even remotely suggest all the features currently recited in claim 1. In particular, applicants respectfully submit that the cited reference fail to teach at least (i) a heatpipe external and discrete with respect to a plate, (ii) a heater between the heatpipe and the plate, (iii) a coolant storage tank adapted to store the coolant supplied to the heatpipe when the plate is heated, and (iv) a thermostatic element adapted to maintaining an approximately constant temperature of the coolant supplied into the heatpipe when the plate is cooled.

With respect to the assertion in the Advisory Action that items (ii)-(iv) above are disclosed in the cited references, viz., lines 1-7 on the continuation sheet, applicants respectfully disagree. Firstly, claim 1 has been amended to clarify the structure of the heater, the heatpipe, and the plate. Secondly, the tank 97 of the Hara et al. reference does not store the coolant supplied to the heatpipe when the plate is heated because the coolant system of the Hara et al. reference teaches maintaining sufficient liquid in the wafer chuck 91 to prevent overheating and drying out.¹ Thirdly, the heat exchanger 2 of the Hara et al. reference *does not* affect the temperature of the coolant in the heatpipe, as recited in claim 1, because the heat exchanger is separate from the wafer chuck and affects only liquid within the heat exchanger.² In fact, the Hara et al. reference clearly states that after the operative liquid is vaporized and expands into the heat exchanger, the resultant liquefied liquid does not go back to the wafer chuck 91.³

The Advisory Action asserts that “the addition of a coolant storage tank and a thermoplastic element to the apparatus of the Hisai et al. is not evidence of improper motivation.”⁴ Applicants respectfully submit that paragraphs V and VI of § 2143.03 of the MPEP clearly state that a *lack of motivation is evidenced* by a showing that a combination

¹ *The Hara et al. reference*, col. 10, lines 10-40.

² *Id.*, at col. 6, lines 7-10.

³ *Id.*, at col. 10, lines 1-7.

⁴ Advisory Action of October 8, 2008, continuation sheet.

proposed in an outstanding rejection renders the prior art unsatisfactory for its intended use or changes its principle of operation. Accordingly, applicants respectfully maintain that one of ordinary skill in the art would not have been motivated to combine the Hisai et al. reference and the Hara et al. reference, because the proposed combination would require a substantial reconstruction and redesign of the heater and cooling system of the Hisai et al. reference to avoid flooding of the inner space 12 of the housing 1h with liquid (see FIG. 3 of the Hisai et al. reference), as discussed previously in the reply to the Office action of June 25, 2008.

In view of the above, applicants respectfully reiterate that the references cited in the outstanding Office action, whether alone or in combination, fail to teach each and every element of claim 1, and therefore, claim 1 is allowable over the cited references. Claims 3-7, 12-16, 18 and 21 depend from claim 1, and therefore, are allowable for at least the same reasons as claim 1 is allowable. Accordingly, applicants respectfully request favorable reconsideration and withdrawal of the rejection of claims 1, 3-7, 12-16, 18 and 21.

C. Asserted Obviousness Rejection of Claims 2, 10 and 11

In the outstanding Office Action Made Final, claims 2, 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hisai et al. reference as modified by the Hara et al. reference and further in view of the Leffert reference.

The Leffert reference fails to cure the deficiencies of the Hisai et al. reference and the Hara et al. reference as set forth above regarding claim 1. Accordingly, claims 2, 10 and 11, which depend from claim 1, are allowable for at least the reasons claim 1 is allowable. Accordingly, applicants respectfully request that this rejection be favorably reconsidered and withdrawn.

D. New Claims 22-25

Claims 22-25 are added by the instant amendment. Claims 22-23 are supported at least by FIG. 4 of the application, and claims 24-25 are supported at least by paragraphs [0053] and [0036], respectively, of the application publication. No new matter is added. Applicants respectfully request entry and examination of claims 22-25.

E. Conclusion

The above remarks point out the fatal deficiencies of the outstanding rejections, and are sufficient to overcome them. However, while these remarks may refer to particular claim elements, they are not intended to, nor need they comprehensively address each and every reason for the patentability of the claimed subject matter over the applied art. Accordingly, applicants respectfully submit that the claims are allowable for reasons including, but not limited to, those set forth above, and that the patentability of the claims does not depend solely on the particular claim elements discussed above.

The remaining document cited in the Office action was not relied on to reject the claims. Therefore, no comments concerning this document are considered necessary at this time.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

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PETITION and
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.